

DOCKET NO. D-1986-069-2

DELAWARE RIVER BASIN COMMISSION

**Southeastern Pennsylvania
Ground Water Protected Area**

**ABB, Inc.
Groundwater Treatment Plant Discharge and Groundwater Withdrawal
Warminster Township, Bucks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted by ABB, Inc. to the Delaware River Basin Commission (DRBC or Commission) on January 27, 2016 (Application) for renewal of a groundwater treatment plant (GWTP) and its related discharge and the renewal of an allocation of groundwater and review of a groundwater water withdrawal project. This docket was previously approved by the Commission on November 8, 1972. The project discharge was most recently approved by the Pennsylvania Department of Environmental Protection (PADEP) National Pollutant Discharge Elimination System (NPDES) Permit No. PA0012238 on November 1, 2011, effective on December 1, 2011. The United States Environmental Protection Agency (USEPA) entered into Consent Decree No. 80-3900 with the former owner Fischer and Porter Company on August 16, 1984 for this remediation project.

The Application was reviewed for approval under Section 3.8 and for a withdrawal permit under Section 10.3 *Delaware River Basin Compact*. The Bucks County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on August 10, 2016.

A. DESCRIPTION

1. **Purpose.** The purpose of this project is to approve a groundwater withdrawal associated with the remediation of groundwater contaminated with trichloroethylene (TCE) and tetrachloroethylene (PCE) of up to 3.348 million gallons per month (mgm) from existing Wells W-1, W-2 and W-7. The approval will also renew the discharge of the remediated groundwater and its associated treatment. The existing groundwater withdrawal is USEPA Consent Decree No. 80-3900 used for remediation purposes and not for use as potable or industrial water supply.

2. **Location.** The groundwater remediation project is located in the Pennypack Creek Watershed in Warminster Township, Bucks County, Pennsylvania. The groundwater recovery wells are completed in the Stockton Formation. The Pennypack Creek near the project site is designated by the PADEP as supporting Trout Stocking Fishes (TSF) and Migratory Fishes (MF).

Treated groundwater will continue to be discharged to an unnamed tributary (UNT) of the Pennypack Creek at River Mile 109.75 – 19.7 – 1.8 (Delaware River – Pennypack Creek – UNT Pennypack Creek) via Outfall No. 001 located, in an area that is conditionally designated as “Modified Recreational” in the Comprehensive Plan as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 11' 16.07”	75° 05' 30.41”

3. **Area Served.** The existing project withdrawals will be used only to accomplish the groundwater remediation at the ABB, Inc. manufacturing facility as delineated on various figures included in the application. The groundwater treatment system will continue to only serve the docket holder’s groundwater remediation project.

For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. **Physical features.**

a. **Design criteria.** The docket holder’s groundwater treatment facility processes up to 0.108 mgd of groundwater containing TCE and PCE by air stripping facilities prior to discharging to an UNT of the Pennypack Creek through the industrial site’s existing stormwater system.

Wells W-1, W-2 and W-7 will be pumped constantly at a combine rate of approximately 0.108 mgd in order to induce a capture zone for the groundwater purge system. Withdrawn groundwater is immediately directed to an air stripper unit for TCE and PCE removal. Treated groundwater will continue to be discharged to an UNT of the Pennypack Creek through existing Outfall No. 001.

The average and maximum demand is 0.108 million gallons per day (mgd) and 0.108 mgd, respectively. The docket holder does not expect an increase in the average or maximum daily demand over the next 10 years. The allocation of 3.348 mgm should be sufficient to meet the future demands of the ABB, Inc. system.

- b. Facilities.** The existing project recovery wells have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
W-1	190	Unknown/ 6"	50	1940
W-2	474	Unknown/ 6"	10	1948
W-7	300	21' / 6"	20	Unknown

All existing wells are metered.

The groundwater treatment system and project recovery wells are outside of the 100-year floodplain.

Groundwater is treated by a packed bed air stripping column for TCE and PCE removal, prior to being discharged.

The docket holder's is presently not interconnected with any other distribution system.

- c. NPDES Permit / DRBC Docket.** NPDES Permit No. PA0012238 was approved by the PADEP on November 1, 2011, and includes final effluent limitations for the groundwater remediation system discharge of 0.108 mgd to surface waters classified by the PADEP as Trout Stocking Fishes (TSF) and Migratory Fishes (MF). The following average monthly effluent limits are among those listed in the NPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: Parameters Included in NPDES Permit

Outfall No. 101 (Discharge to UNT of the Pennypack Creek)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6.0 to 9.0 at all times	As required in the NPDES permit
Tetrachloroethylene (PCE)	0.01 mg/l	As required in the NPDES permit
Trichloroethylene (TCE)	0.035 mg/l	As required in the NPDES permit

- d. Cost.** There is no associated cost with this project.

B. FINDINGS

The industrial wastewater discharge for cooling water approval was issued by the Commission to Fischer and Porter Company via Docket No. D-1971-215 on November 8, 1972. The application for the project related to the groundwater withdrawal was terminated, due to the withdrawals at the facility were below the Commission thresholds before the inception of the Southeastern Pennsylvania Groundwater Protected Area (SEPA GWPA) (Application No. D-1986-069). Issuance of this docket will approve the withdrawal for the remediation program and its related discharge.

The former owner Fischer and Porter entered into a Consent Decree (No. 80-3900) with the USEPA on August 16, 1984 to remediate chlorinated VOCs in the groundwater. Per the Consent Order, it is required for the owner to establish hydraulic control of hazardous constituents in the groundwater through continuous pumping of recovery wells at a minimum combined rate of 0.108 mgd. A groundwater recovery system was activated on January 31, 1986 and must continue to operate until either:

1. the concentrations of TCE and PCE in the untreated influent to the treatment system fall below the treatment levels for twelve (12) consecutive months; or
2. the value of each of the twelve (12) consecutive plotted concentrations are within 10% of the mean average of the twelve (12) consecutive points.

Groundwater from the hydraulic containment system is treated on-site using an air-stripping tower and discharged to the existing on-site stormwater system approved under NPDES Permit No. PA0012238.

Ground Water Protected Area

The project is located within the Southeastern Pennsylvania Ground Water Protected Area delineated by the DRBC pursuant to *Compact* Section 10.2. The project is designed to conform to the requirements of the *Water Code*, *Water Quality Regulations* and *Ground Water Protected Area Regulations (GWPAR)* of the DRBC.

Review and analysis of the application pursuant to Section 6.D. of the *GWPAR* result in the following:

1. The withdrawal is consistent with the Commission's Comprehensive Plan and the policies and purposes of these regulations.
2. Opportunities to satisfy water requirements on a timely basis from existing available supplies and facilities have been explored and found infeasible.

3. The withdrawal, in conjunction with other withdrawals in the applicable ground water basin, should not exceed withdrawal limits of the ground water basin, aquifer or aquifer system.

4. The withdrawal should not significantly impair or reduce the flow of perennial streams in the area.

5. Existing ground and surface water withdrawals should not be adversely impacted, or will be otherwise assured of adequate supplies in accordance with the requirements of Section 10 of the *GWPAR*.

6. The withdrawal should not cause substantial, permanent adverse impact to the overlying environment.

7. The docket holder adopted and will implement conservation and management programs as required by Section 7 of the *GWPAR*.

The ABB, Inc. remediation wells are located in the Upper Reach Pennypack Creek subbasin (No. 25), where total net annual groundwater withdrawal (822.53 mgy) is less than the withdrawal limit set in Section 6.I of the *GWPAR* (1,811 mgy). The total annual groundwater allocation from these wells is limited to 40.18 mgy, a fraction of which will be returned to groundwater. However, even if no water from this project were returned to groundwater, the total net annual groundwater withdrawal from this subbasin would remain below the withdrawal limits set in Section 6.I of the *GWPAR*. Therefore, the withdrawals from the ABB, Inc. remediation wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

The DRBC estimates that the project withdrawals, used for the purpose of groundwater remediation, result in negligible consumptive use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

At the project site, the UNT of the Pennypack Creek has an estimated seven-day low flow with a recurrence interval of ten years of 0.016 mgd (0.029 cfs). The flow was calculated using U.S. Geological Survey, 2012, The StreamStats Program for Pennsylvania, online at <http://water.usgs.gov/osw/streamstats/pennsylvania.html>. The ratio of this low flow to the average design wastewater discharge (0.016 mgd / 0.108 mgd) from the 0.108 mgd plant is 0.15 to 1.

There are no surface water intakes of record for public water supply is located downstream of the docket holder's intake.

The limits in the NPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *Water Quality Regulations* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

I. Effective on the approval date for Docket No. D-1986-069-2 below, Docket No. D-1971-215 is terminated and replaced by Docket No. D-1986-069-2.

II. The project and appurtenant facilities as described in the Section A “Physical features” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its NPDES Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

b. The docket holder shall continue to report to the PADEP all groundwater withdrawals described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

c. The facility, wells and operational records shall be available at all times for inspection by the DRBC.

d. The facility and wells shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

e. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the Rules of Practice and Procedure.

f. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served section of this docket, which incorporates by reference sections B (Type of Discharge) and D (Service Area) of the docket holder’s Application to the extent consistent with all other conditions of this DECISION section.

g. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

h. During any month, the combined withdrawal from all well sources shall not exceed 3.348 million gallons. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM INSTANTANEOUS RATE (GPM)	MONTHLY ALLOCATION (MILLION GALLONS)
W-1	50	2.100
W-2	10	0.446
W-7	20	0.803

i. The wells shall be equipped with readily accessible capped ports and minimum ½ inch inner diameter (ID) drop pipes so that water levels may be measured under all conditions. Existing wells are to be similarly equipped, where possible, with readily accessible ports and ½ inch ID drop pipes as repairs or modifications are made at each existing well.

j. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

k. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

l. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

m. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

n. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the docket holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the docket holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via certified mail or email (using addresses posted on the DRBC website); or (b) written notice in accordance with the preceding clause and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

o. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

p. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

q. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the *Delaware River Basin Compact*, cases and controversies arising under the Compact are reviewable in the United States district courts.

r. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

BY THE COMMISSION**APPROVAL DATE: September 14, 2016****EXPIRATION DATE: September 14, 2026**